



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2012-0633; Directorate Identifier 2012-CE-018-AD; Amendment 39-17170; AD 2012-17-07]**

**RIN 2120-AA64**

**Airworthiness Directives; Diamond Aircraft Industries GmbH Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Diamond Aircraft Industries GmbH Models DA 42, DA 42 NG, and DA 42 M-NG airplanes. This AD results from mandatory continuing airworthiness information (MCAI) issued by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as excessive voids in the adhesive joint between the center wing spars and the upper center wing skins. This condition could cause the wing to fail, which could result in loss of control of the airplane. We are issuing this AD to require actions to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may examine the AD docket on the Internet at <http://www.regulations.gov> or in person at Document Management Facility, U.S.

Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE, Washington, DC 20590.

For service information identified in this AD, contact Diamond Aircraft Industries GmbH, N.A. Otto-Straße 5, A-2700 Wiener Neustadt, Austria, telephone: +43 2622 26700; fax: +43 2622 26780; email: [office@diamond-air.at](mailto:office@diamond-air.at); Internet: <http://www.diamond-air.at>. You may review copies of the referenced service information at the FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

**FOR FURTHER INFORMATION CONTACT:** Mike Kiesov, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4144; fax: (816) 329-4090; email: [mike.kiesov@faa.gov](mailto:mike.kiesov@faa.gov).

#### **SUPPLEMENTARY INFORMATION:**

##### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM was published in the *Federal Register* on June 15, 2012 (77 FR 35890). That NPRM proposed to correct an unsafe condition for the specified products. The MCAI states:

During conversion of a DA 42 to a DA 42 NG, voids were detected in the adhesive joint between the centre wing spars and the upper centre wing skins, between the fuselage wall and the engine nacelle. The available information indicates that wings with voids continue to meet the certification design limits, provided the voids are within established criteria.

However, to detect any wings that may have voids exceeding these criteria, Diamond has issued Mandatory Service Bulletin (MSB) 42-092 and MSB 42NG-022 (single document) that describes instructions for inspection of the aeroplanes that had these wings installed during manufacture. Aeroplanes that have voids within the inspection criteria may continue to operate without restriction, pending the outcome of ongoing investigations. Aeroplanes that have voids exceeding the inspection criteria must be repaired.

For reasons described above, the EASA AD required the inspection of the affected aeroplanes to measure the voids in the adhesive joint between the centre wing spars and the upper centre wing skins, the reporting of all findings to Diamond Aircraft Industries and the repair of any voids exceeding the criteria as specified in the MSB.

### **Comments**

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM (77 FR 35890, June 15, 2012) or on the determination of the cost to the public.

### **Conclusion**

We reviewed the relevant data and determined that air safety and the public interest require adopting the AD as proposed except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (77 FR 35890, June 15, 2012) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (77 FR 35890, June 15, 2012).

### **Costs of Compliance**

We estimate that this AD will affect 172 products of U.S. registry. We also estimate that it will take about 2 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour.

Based on these figures, we estimate the cost of this AD on U.S. operators to be \$29,240, or \$170 per product.

In addition, we estimate that any necessary follow-on actions will take about 10 work-hours, for a cost of \$850 per product. We have no way of determining the number of products that may need these actions.

According to the manufacturer, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

### **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains the NPRM, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new AD:

2012-17-07 **Diamond Aircraft Industries GmbH**: Amendment 39-17170; Docket No. FAA-2012-0633; Directorate Identifier 2012-CE-018-AD.

#### **(a) Effective Date**

This airworthiness directive (AD) becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to the following Diamond Aircraft Industries GmbH Models DA 42, DA 42 NG, and DA 42 M-NG airplanes: serial numbers 42.006 through 42.008, 42.010, 42.012 through 42.014, 42.016 through 42.033, 42.035 through 42.043, 42.045, 42.046, 42.048 through 42.051, 42.053, 42.055 through 42.059, 42.061 through 42.081, 42.083 through 42.093, 42.096 through 42.097, 42.099 through 42.120, 42.122 through 42.125, 42.127 through 42.148, 42.150 through 42.170, 42.172 through 42.176, 42.178, 42.179, 42.181 through 42.200, 42.202 through 42.224, 42.AC001 through 42.AC028, and 42.AC030 through 42.AC052, certificated in any category.

**(d) Subject**

Air Transport Association of America (ATA) Code 57, Wings.

**(e) Reason**

This AD was prompted by mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as excessive voids in the adhesive joint between the center wing spars and the upper center wing skins. We are issuing this AD to prevent wing failure, which could result in loss of control of the airplane.

**(f) Actions and Compliance**

Unless already done, do the following actions:

(1) Within the next 100 hours time-in-service (TIS) after [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] (the effective date of this AD) or within the next 3 months after [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER] (the effective date of this AD), whichever occurs first, inspect the adhesive joint between the center wing spars and the upper center wing skin following Diamond Aircraft Industries GmbH Work

Instruction WI-MSB-42-092, WI-MSB-42NG-22, dated May 20, 2011, as specified in Diamond Aircraft Industries GmbH Mandatory Service Bulletin No. MSB 42-092, MSB 42NG-022, dated May 20, 2011.

(2) Within 30 days after the inspection required in paragraph (f)(1) of this AD, using Appendix A of Diamond Aircraft Industries GmbH Work Instruction WI-MSB-42-092, WI-MSB-42NG-22, dated May 20, 2011, report the results of the inspection to Diamond Aircraft Industries GmbH at the address in paragraph (i)(3) of this AD.

(3) If, during the inspection required in paragraph (f)(1) of this AD, voids are detected that exceed the criteria specified in Diamond Aircraft Industries GmbH Work Instruction WI-MSB-42-092, WI-MSB-42NG-22, dated May 20, 2011, before further flight, repair the airplane following Diamond Aircraft Industries GmbH Work Instruction WI-MSB-42-092, WI-MSB-42NG-22, dated May 20, 2011, as specified in Diamond Aircraft Industries GmbH Mandatory Service Bulletin No. MSB 42-092, MSB 42NG-022, dated May 20, 2011.

(4) For the purpose of compliance with paragraph (f)(3) of this AD, a single positioning flight is allowed to a location where the repair can be done following the provisions specified in Section III.1 of Diamond Aircraft Industries GmbH Work Instruction WI-MSB-42-092, WI-MSB-42NG-22, dated May 20, 2011.

**(g) Other FAA AD Provisions**

The following provisions also apply to this AD:

(1) **Alternative Methods of Compliance (AMOCs):** The Manager, Standards Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Mike Kiesov, Aerospace Engineer, FAA, Small Airplane Directorate, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone: (816) 329-4144; fax: (816) 329-4090; email:

mike.kiesov@faa.gov. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(2) **Airworthy Product:** For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(3) **Reporting Requirements:** For any reporting requirement in this AD, a federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 5 minutes per response, including the time for reviewing instructions, completing and reviewing the collection of information. All responses to this collection of information are mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW, Washington, DC 20591, Attn: Information Collection Clearance Officer, AES-200.

**(h) Related Information**

Refer to MCAI European Aviation Safety Agency (EASA) AD No. 2011-0100, dated May 26, 2011; Diamond Aircraft Industries GmbH Mandatory Service Bulletin No. MSB 42-092, MSB 42NG-022, dated May 20, 2011; and Diamond Aircraft Industries GmbH Work Instruction WI-MSB-42-092, WI-MSB-42NG-22, dated May 20, 2011, for related information.



**(i) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Diamond Aircraft Industries GmbH Mandatory Service Bulletin No. MSB 42-092, MSB 42NG-022, dated May 20, 2011.

(ii) Diamond Aircraft Industries GmbH Work Instruction WI-MSB-42-092, WI-MSB-42NG-22, dated May 20, 2011.

(3) For Diamond Aircraft Industries GmbH service information identified in this AD, contact Diamond Aircraft Industries GmbH, N.A. Otto-Straße 5, A-2700 Wiener Neustadt, Austria, telephone: +43 2622 26700; fax: +43 2622 26780; email: [office@diamond-air.at](mailto:office@diamond-air.at); Internet: <http://www.diamond-air.at>.

(4) You may view this service information at FAA, FAA, Small Airplane Directorate, 901 Locust, Kansas City, Missouri 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/index.html>.

Issued in Kansas City, Missouri, on August 21, 2012.

Earl Lawrence,  
Manager, Small Airplane Directorate,  
Aircraft Certification Service.

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